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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,624	09/05/2006	Jorg Fruchtel	33596-US-PCT	3300
74479                      7590                      10/24/2008 Novartis Animal Health US Inc. 3200 Northline Avenue, Suite 300 Greensboro, NC 27408				
EXAMINER				
KLINKEL, KORTNEY L.				
ART UNIT		PAPER NUMBER		
1611				
MAIL DATE		DELIVERY MODE		
10/24/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,624

**Applicant(s)**

FRUCHTEL ET AL.

**Examiner**

Kortney L. Klinkel

**Art Unit**

1611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 22-24 and 27-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 9/5/2008 and 11/1/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claims***

Acknowledgement is made of Applicants' amendment filed July 14, 2008 in which claims 25-26 were cancelled, claim 22 was amended and claims 27-30 were added.

Claims 1-24 and 27-30 are pending in the instant Office action.

### ***Election/Restriction***

Applicant's election without traverse of Group II, claims 22-23 and 27-30 in the reply filed on 7/14/2008 is acknowledged. Acknowledgement is also made of Applicants election of the species 4,6-bis(4-fluoro-3-(trifluoromethyl)phenoxy)pyrimidin-5-ylamine in the reply filed 8/29/2008. This species is the compound of Example 3, page 29 of the specification and also compound 1.9 in Table 1, page 31. Applicants traverse the species election on the ground(s) that it would not be unduly burdensome to examine all species. However, the establishment of burden on the Office applies to US cases only. The instant application is a national stage entry of an international application under 35 U.S.C. 371. As a result, lack of unity practice is observed for restriction purposes. The requirement is still deemed proper and is therefore made FINAL.

Claims 1-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected subject matter, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 14, 2008.

***Information Disclosure Statement***

Acknowledgement is made of applicant's submitting information disclosure statements on September 5, 2006 and November 1, 2006. With the exception of those references which have been lined out, the submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner. EP 0650482 and WO 94/02470 were not considered because no copy was provided. Should Applicant desire their consideration, a copy must be submitted.

***Foreign Priority***

Acknowledgement is made of applicant's foreign priority claim to EPO patent application serial number 04005423.1 filed March 7, 2004. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

Claim 24 is objected to for being dependent on the compound of a withdrawn claim. Appropriate corrective action is requested.

### ***Claim Rejections - 35 USC § 102***

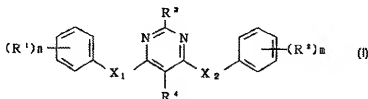
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

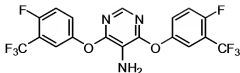
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-24 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamamoto et al. (WO 98/54154, as per Applicants' IDS).

Hamamoto teaches compounds of formula (I), see below, wherein  $R^1$  and  $R^2$  independently represent halogeno, and  $C_{1-6}$  haloalkyl, *inter alia*, n and m represent an integer from 1 to 5,  $R^3$  represents hydrogen *inter alia*,  $R^4$  represents  $NR^5R^6$  *inter alia*, and  $X_1$  and  $X_2$  each independently represent O or  $NR^{11}$ , and their use as pesticides, which implies the presence of a carrier (abstract).



Specifically Hamamoto teaches Applicants' elected species, 4,6-bis(4-fluoro-3-(trifluoromethyl)phenoxy)-pyrimidin-5-ylamine (Compound 1, Table 1, page 30),



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

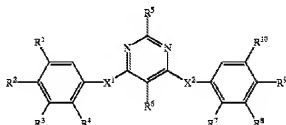
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

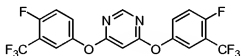
consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 22-24 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (US 6342499, as per Applicants' IDS) in further view of Patani et al (Chem. Rev. 1996, 96, 3147-3176).

Black teaches compounds of the following generic structure wherein  $R^2$  and  $R^9$  are F, *inter alia*,  $X^1$  and  $X^2$  are O, *inter alia*, and  $R^3$  and  $R^8$  are  $C_{1-6}$  haloalkyl, *inter alia*, and all remaining variables are H, *inter alia* (column 2 lines 1-44), and their use as pesticides, namely as anti-mite agents.



One of Black's working examples is drawn to the compound 4,6-bis[( $\alpha,\alpha,\alpha$ ,4-tetrafluorom-tolyl)oxy]pyrimidine, which has the following structure (Table 1).



This compounds differs from that of the instantly elected compound in that an  $-NH_2$  is missing in the 5-position.

Patani et al. teach that amino and hydrogen are bioisosteres (page 5152, section 4).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to arrive at the instant compound with a reasonable expectation for success. Black teaches a compound that is structurally very similar to the instant compound which is also used for the same purpose, namely that as a pesticide. The compounds only differ in the substitution at the 5-position. Patani teaches that hydrogen and  $-NH_2$  are functional equivalents. Accordingly, one of ordinary skill in the art would expect the compound with the  $-NH_2$  and the  $-H$  in the 5-position to possess similar properties.

Applicants' data in the specification has been considered. Applicants' state that compound 1.9, the elected species, shows an efficacy against the mite, *Ctenocephalides felis* of more than 80% at 100 ppm. Applicants have no other data for this compound against any other parasite. Because Black teaches a compound that is useful as an anti-mite agent and is structurally very similar to the instant compound, differing only in the 5-position and Patani teaches that hydrogen and  $-NH_2$  are bioisosteres, one of ordinary skill in the art would expect the instant compound to show similar functionality to Black's compound. This is, in fact, what is observed. Both Black's compound and the instant compound are anti-mite agents. Accordingly, no unexpected results exist.

### ***Conclusion***

Claims 22-24 and 27-30 are rejected. No claim is allowed.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kortney Klinkel, Ph.D. whose telephone number is (571)270-5239. The examiner can normally be reached on Monday-Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLK

/Sharmila Gollamudi Landau/

Supervisory Patent Examiner, Art Unit 1611